UNION CARBIDE

NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 5 — No. 13 July 5, 1974

QUESTION BOX ??

If you have questions on company policies, benefits, etc. or any other problems with which we might help, just let us know. Drop your inquiry to the Editor, **Nuclear Division News.** *(Or telephone it in to your plant news representative . . . see page two). You may or may not sign your name. It will not be used in the paper.*

Questions are referred to the proper authorities for accurate answers. Each query is given serious consideration for publication.

Answers may be given to employees personally if they so desire.

QUESTION: Why does Carbide continue to promote and coerce employees to donate to various charities? All investigations being conducted by government agencies, as well as private organizations, reflect that advertising and salaries of the promoters take most of the money, and less than 10 percent eventually reaches the organization for which free-hearted employees are making contributions. Of course, it is well known that company appointees donate their own time.

Most people give to the church, just about all they can. The church is in a much better position to have knowledge of deserving people . . . more so than the people administering these programs. Furthermore, in my own community, Boys' Club, Boy Scouts and Girl Scouts received more money through community efforts than was alloted them through the United Fund.

ANSWER: Carbide supports only one drive, The United Way. Contributions to the fund are voluntary and 96½ cents from each dollar collected by the United Way of Anderson County goes directly to the nearly 25 agencies which the United Way represents. Some agencies including the Boy's Club, Boy Scouts and Girl Scouts do receive help from the United Way with the understanding that much of their support must come from other sources.

Nuclear Division employees also contribute money through the Carbide campaign to other United Way organizations in the Oak Ridge and Paducah areas. Over 90 percent of the money which is donated is alloted to the agencies which they support.

In the January 5 issue of the **Nuclear Division News** we talked about the reasons for Carbide's support of the United Way campaign. In that letter we made this statement, "In spite of our support and encouragement we do not want to pressure our employees into giving a fair share or high percentage contribution. Each employee should decide for himself his own degree of support to the United Way."

QUESTION: Why does the Y-12 Plant not have an apprenticeship program?

ANSWER: The Y-12 Plant recently had apprenticeship programs in electrical, pipefitting, and the outside machinist classifications. Programs involving pipefitting and outside machinists were completed in September 1972, and the electrical program was completed in April 1974.

Due to reductions in force during the past year, no new apprenticeship programs were planned. New apprentice programs will begin, however, when it is determined that a need exists to meet the future work load demands for craftsmen. It is not clear right now how soon this will be.

QUESTION: Isn't there some manner in which we can pressure our insurance company to uncomplicate their procedures? Ex. — I am already into Major Medical . . . and small incidental bills (for which I have signed receipts) all require a signed form from the druggist, etc. Why shouldn't a signed receipt suffice? It seems that there is a tremendous amount of bother where small bills are concerned. Perhaps this is the philosophy of the carrier. The effort will be so great, it's not worth fooling with.

ANSWER: Blue Cross and Union Mutual made approximately 35,000 payments in 1973 for benefits under the hospitalization and major medical programs. This averages more than 135 payments each working day. With this vol-

(Continued on page 8)

Nuclear Division initiates job opportunity system for weekly salaried employees

A job opportunity system for weekly salaried employees at each installation in the Nuclear Division was intiated July 1. All weekly salaried jobs, except those at the entry level, are covered by the system.

While promotion from within has been a Nuclear Division policy over the years, the new system is designed to improve performance in this area.

The system, which has been under study for the past few years, also is responsive to comments made in the recent attitude survey.

Listed on boards

Job openings which offer promotional opportunities at a facility will be listed for five working days on appropriate bulletin boards at that facility. Additional information about a listed opportunity can be obtained from supervisors and from the Employment Department. Supervisors have been asked to provide assistance and encouragement to employees seeking promotional opportunities.

If an employee decides to apply for a listed job, he must complete an internal application form which can be obtained from the supervisor or from the Employment Office.

First consideration in filling listed openings will be given to employees to whom the opening would represent a promotion. Naturally, qualifications will be the major factor in the selection process. Qualifications include job knowledge, experience, quality and quantity of work, interest, work habits, attendance and demonstrated skill.

Exceptions

There may be times when it will be necessary to make exceptions to filling jobs through the system. For example, in-line promotions will not be listed when the incumbent has demonstrated the ability to perform the higher classification in job series and no replacement is required. During staff reductions, consolidations or reorganizations, assignments to suitable vacancies for those employees involved might be accomplished without listing the opening.

The system will have a six-month trial period during which it will be thoroughly evaluated.

Every effort has been made to keep the system as simple and informal as possible, so that the objectives may be accomplished with a minimum of red tape.

Next Issue

The next issue will be dated July 18. The deadline is July 10.

Y-12 surpasses own safety record; 377 days without disabling injury

The Oak Ridge Y-12 Plant has set another safety record - 377 days without a disabling (lost-time) accident. The record was set at midnight, June 24.

The only other complete year Y-12 went without a lost-time accident was from October 20, 1971, through October 29, 1972 (376 days).

Jack M. Case, Y-12 Plant Superintendent, praised all employees for contributing to the new record in a special message on the Y-12 Plant public address system. He also urged continued efforts by all employees in preventing accidents. The following is the text of his message:

"It is gratifying to have this opportunity to recognize and commend you for another outstanding safety achievement - 377 days as of midnight, June 24, 1974, since our last disabling (lost time) injury. This exceeds our best previous record of 376 days.

"It goes without saying that these outstanding achievements are the result of the efforts of every employee in the Y-12 area.

"While it is good to achieve and break records, our greatest reward is a safe plant in which every individual returns home each day free from injury, pain and suffering.

"Let's keep our efforts in accident prevention foremost in our everyday tasks."

NUCLEAR DIVISION SAFETY SCOREBOARD

Time worked without a lost-time accident through June 27:

Paducah	133 Days	817,000 Man-Hours
ORGDP	113 Days	1,995,088 Man-Hours
ORNL	51 Days	900,288 Man-Hours
Y-12 Plant	380 Days	11,950,000 Man-Hours

UCC retirement, SS benefits outlined

HAPPY RETIREE — Edward Rawlings retired as a guard at ORNL several months ago. He is shown with his grandson, Ed IV, who is visiting him this summer. Rawlings is learning to play golf and spends lots of time fishing and working in his garden. "I don't know how I ever found time to go to work," says Rawlings.

Company's pension plan - no contribution from employees

A booklet describing the Union Carbide Pension Plan will be mailed to the homes of Nuclear Division employees within a few days.

The Pension Plan, one of the most important employee benefits, is totally paid for by the Company and is designed to provide employees with a monthly income for the rest of their lives after retirement. The Plan also contains features that can pay benefits in the event of an employee's death or disability prior to retirement, once he, or she, has attained the required number of years of Company service.

A full pension is payable to persons who retire at age 65 with at least 10 years of service; at 62 with 10 or more years of service; at 60 with 30 or more years of service; or at 55 with 35 or more years of service.

Income formulas

The amount of monthly retirement income is figured according to one of the two following formulas, whichever gives the employee more.

The **regular formula** provides 1.2 percent of a person's average straight-time monthly earnings times the years and months of Company service credit. Each completed month counts as one-twelfth of a year.

There is also a **minimum provision formula** which provides $4 a month for each of the first 10 years of Company service; $5 a month for the eleventh through the twentieth years of Company service; and $6 a month for each year in excess of 20 years of Company service; plus 10 percent of your average straight-time monthly earnings.

Based on pay

Average straight-time monthly earnings are based on an employee's straight-time rate of pay the final five years before retirement, or, if greater, the five calendar years in which these earnings were highest, during the final 10 calendar years before retirement.

If an employee retires before being entitled to a full pension, the amount produced by either formula is reduced on a percentage basis. This reduction equals six and two-thirds percent for each of the first three years of retirement before he would otherwise qualify for a full pension and five percent for each additional year.

If an employee dies before retirement, having completed at least 10 years of Company service and having reached the age of 55, his spouse will receive a lifetime monthly income equal to 50 percent of the pension that would have been paid if he had retired on the date of his death. If his spouse is more than five years younger, this benefit will be reduced one-half percent for each complete year over five years.

Vested rights

Should an employee decide to leave the Company after age 40, after completing at least 10 years of service, he has vested rights for a full pension benefit at age 65 or for a reduced benefit if taken at an earlier age. The amount of the pension will depend on average earnings, years of service from age 30 to the time of termination and the age at which the employee wants the pension to begin.

When pension benefits are calculated for employees who were in the UCC Contributory Retirement Plan on July 1, 1969 and have continued participation, 80 percent of the benefit payable from the Retirement Plan will be subtracted from the pension calculations in arriving at the amount of the benefit payable from the Pension Plan.

In addition to the monthly retirement income from the Company Pension Plan, a retiree will receive social security benefit payments from the U. S. Government. The amount of payment is based on a person's average earnings under social security over a period of years. The amount of benefits to the person's dependents or survivors also depends on his average earnings.

Social security benefits will increase automatically in future years as the cost of living rises. Each year, living costs will be compared with those of the year before. If living costs have increased three percent or more, benefits will be increased by the same amount the following June unless Congress has already acted to raise benefits. The first automatic increase cannot come before June, 1975.

Monthly Income from the Pension Plan

Payable when you retire after attaining eligibility for a full (non-actuarially reduced) pension

Final Average Earnings	Years' Service at Retirement				
	20	25	30	35	40
$500 a mo.	140*	170*	200*	230*	260*
600 a mo.	150*	180	216	252	288
700 a mo.	168	210	252	294	336
800 a mo.	192	240	288	336	384
900 a mo.	216	270	324	378	432
1000 a mo.	240	300	360	420	480

(*minimum pension since it provides more than regular formula)

SS benefits; company contributes

While you are working, social security contributions are taken out of your wages. The Company pays a similar amount on your behalf. You and the Company will pay social security contributions on all wages up to $13,200 in 1974. This amount will increase automatically in years to come to keep up with changes in average covered income levels. This means that a worker paying increased social security contributions can be sure of higher benefits later because his benefits will be based on a higher level of earnings.

If an individual qualifies for checks on the record of more than one worker - for example, on a woman's own work record as well as that of her husband - the individual will receive the larger of the two amounts.

Cash benefits

The social security benefits table shows examples of monthly cash benefits payable as of June, 1974, based on several different levels of average yearly earnings. Many persons think that if they have always earned the maximum amount covered by social security they will receive the highest benefit shown on the chart. This isn't so. Although retirement benefits as high as $412.40 a month are shown, payments this high can't be paid to a worker retiring at 65 now. The maximum retirement benefit for a man who becomes 65 in July, 1974, is $304.90 a month, based on average covered yearly earnings of $6,132.

The reason the average can be no higher now is that the maximum earnings covered by social security were lower in past years. Those years of lower limits must be counted in with the higher ones of recent years to figure your average covered yearly earnings and this average determines the amount of your check.

The maximum earnings on which social security taxes have been paid since 1951 are:

1951 - 1954 —	$ 3,600
1955 - 1958 —	4,200
1959 - 1965 —	4,800
1966 - 1967 —	6,600
1968 - 1971 —	7,800
1972 -	9,000
1973 -	10,800
1974 -	13,200

Best pay years used

In calculating a person's average yearly earnings, the lowest five years of earnings are excluded and an average of the remaining full years of earnings is obtained. In other words, for a person retiring in 1974, the best full 18 years are averaged. If retirement is in 1975, the best full 19 years would be used.

Survivors and disability benefits can reach higher levels now, however, because fewer years and higher earnings levels are used to figure the average earnings for young workers. For example, if a worker becomes disabled in 1974 at age 29 or younger and he had an average covered yearly earnings of $8,400 over two years, his disability benefit would be $380.20 a month starting in June, 1974. If this young man has a wife and two children, family benefits would be $665.40 a month.

(See Table on page 8)

ORNL receives authorization to build nuclear components

When you build components for nuclear power plants, it goes without saying that you want to do the job right the first time and every time.

To ensure that this will be the case, the American Society of Mechanical Engineers (ASME) evolved a Boiler and Pressure Vessel code which sets forth specific quality assurance responsibilities of the owner, the manufacturers, installers and authorized inspection agencies. It's called the Controlled Manufacturing Program. The ASME Code is the generally accepted engineering and, often, legal document for the design, materials, construction, inspection, testing and installation of pressure-bearing nuclear components in most of the free world.

Nuclear components covered by the Code include pressure vessels, pumps, valves and piping used in nuclear power plant systems.

100 are involved

Although ORNL is a research organization and is not in the business of building nuclear power plants, the Laboratory recently became the first AEC national laboratory to gain ASME certification to build a variety of experimental nuclear plant components according to ASME Code.

The effort, capped by a three-day-long "test," took almost a year and involved about 100 people.

The effort began when the Laboratory's Inspection Engineering Department was assigned the task of directing an ad hoc committee to prepare two required detailed manuals. One states the administrative controls required in design, fabrication, inspection and installation of equipment. The other voluminous document puts forth the specific procedures, including details of welding, non-destructive examination, cleaning and forming.

The committee, consisting of Jim McGuffey (chairman), Jim Robinson, Ken Klindt, Bob Farnham, Bill Ferguson, and Bill Graves worked intermittently for the entire period to tailor divisional responsibilities, relationships and procedures to assure compliance with the ASME Code rules.

Voluntary compliance

Before it was over, some 100 engineers, supervisors and inspectors in the design, fabrication, procurement, purchasing, quality assurance and inspection departments provided input. The net result was a workable, efficient system to perform and control all of the critical activities involved in constructing high quality pressure-containing equipment at the Laboratory.

According to Myer Bender, Manager of Engineering at ORNL, the ASME certification is "evidence that the Atomic Energy Commission practices what it preaches." Bender explained that the AEC requires that commercial nuclear power plants be built according to the ASME Code. Encouraging ORNL, an AEC laboratory, to seek the same certification amounted to voluntary compliance on the part of AEC, Bender said.

Recently a special luncheon was held at ORNL to commemorate the occasion. Herman Postma, Floyd Culler and other Laboratory officials attended, along with many members of the ad hoc committee.

Stamps are coded

There were several certificates presented, but the focal point was a small wooden box of heavy metal objects with raised backward symbols molded at one end. These were the five actual stamps presented by the ASME. They serve as symbols of care in workmanship and, when the business end of a hammer is applied, they indelibly mark a symbol on the nameplate that is permanently attached to nuclear equipment. The stamps are as follows:

"N" (nuclear pressure vessels and heat exchangers)

"NPT" (nuclear piping subassemblies)

"NA" (installation of nuclear equipment)

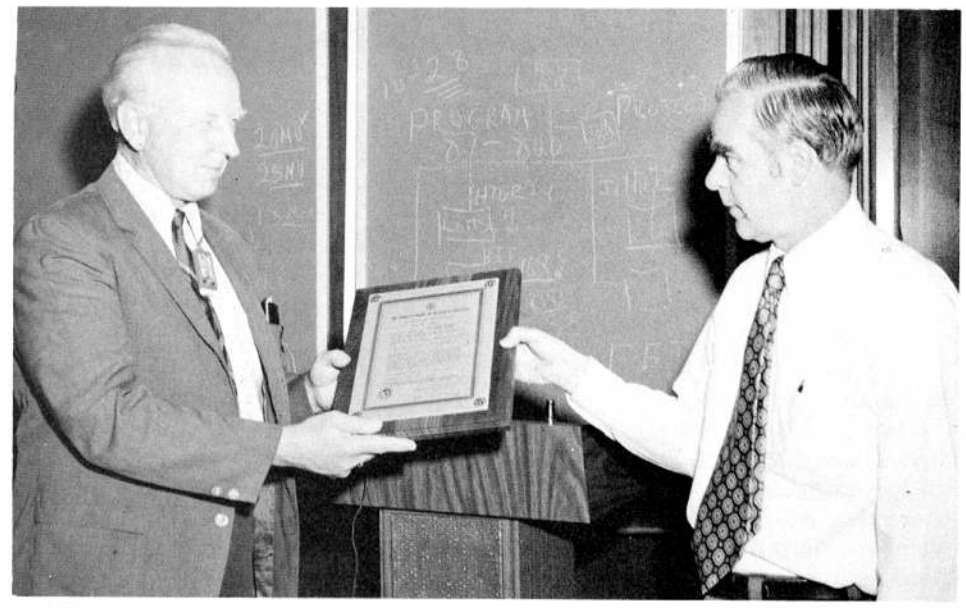
"U" and "U2" (apply to conventional heat exchangers and pressure vessels)

Nearly a year's effort was climaxed in the last week of January this year by the visit to ORNL by two ASME survey teams. Their task was to evaluate ORNL's program to design, manufacture and install equipment in accordance with the ASME Code. Months later, based on the teams' recommendations, an ASME committee officially granted Certificates of Authorization to the Laboratory. From past experience, the chances of any organization meeting ASME's requirements on the first try is no better than one in four. "A major accomplishment," Laboratory Director Herman Postma called it in a "thank you" note to some of the key staff involved in obtaining the ORNL certifications.

The ASME also requires the manufacturer to prove the adequacy of the system by actual demonstration. Therefore, a 2,500 psi pressure vessel, slated for use in a future experiment, was constructed.

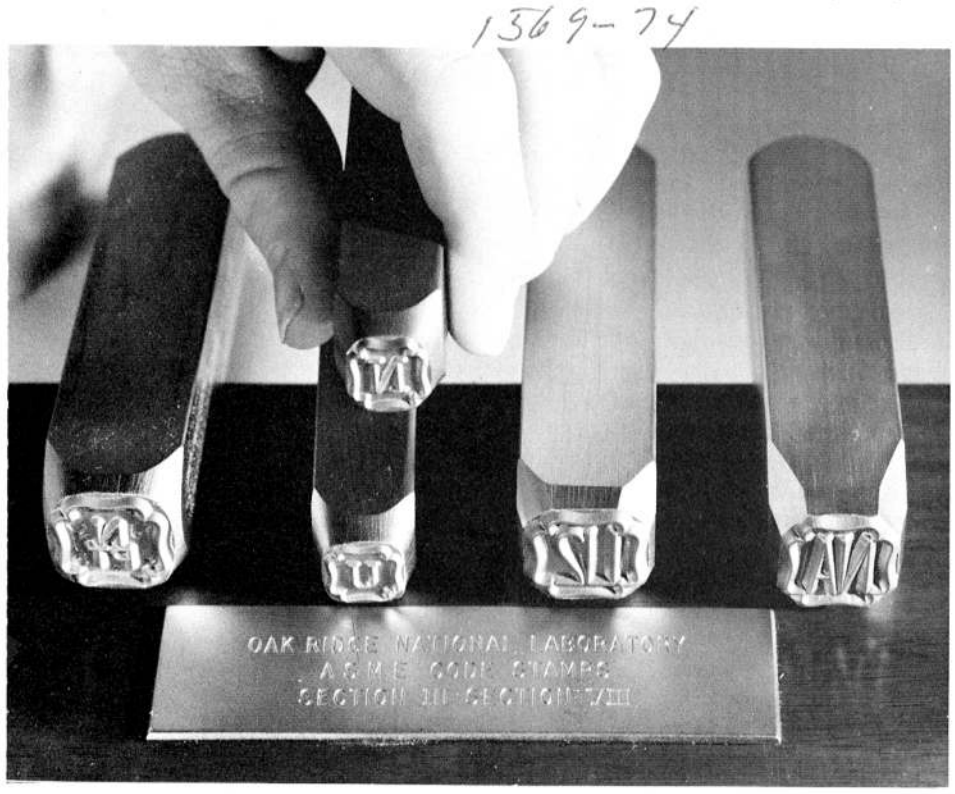
Reevaluation program

McGuffey said, "We have verified that, in fact, the kind of work we do is consistant with that required of the people in the commercial nuclear industry." But he cautioned that the Laboratory's authorization to build nuclear equipment according to ASME Code is subject to reevaluation at three-year intervals. So, there can be no relaxing even though the test has been passed.



CERTIFICATE OF AUTHORIZATION — Harry E. Seagren (left), superintendent of Plant and Equipment, accepts the "N" stamp's certificate of authorization from James R. McGuffey, superintendent of Instrumentation and Controls at ORNL. The code stamps will be placed in the care of Plant and Equipment since the actual construction of components will be done in its shops.

1369-74



CODE STAMPS — ORNL is the first Atomic Energy Commission national laboratory to receive certification by the American Society of Mechanical Engineers to build components for experimental nuclear power plants according to ASME Code. The five code stamps are shown above.

Nuclear Division Deaths

Silas R. Brown, Route 2, Oliver Springs, died at the Oak Ridge Hospital June 16. He was employed in Y-12's Alpha-5 north shop.

Mr. Brown

A veteran of the U. S. Navy, Mr. Brown joined Union Carbide in 1955.

He is survived by his wife, Mrs. Zola Clowers Brown; sons, Ronald and Douglas; two sisters; three brothers; and one grandchild.

Funeral services were held at the Sharp Funeral Home, with the Rev. Milford Ely officiating. Burial was in the Oliver Springs Cemetery.

RETIRED ORGDP GUARD

Floyd M. Pierce, a retired guard from ORGDP, died June 16 in Oak Ridge. He retired in 1963. He is survived by his wife, five daughters, 25 grandchildren, seven great-grandchildren, a sister and two brothers.

RETIRED Y-12 MACHINIST

James P. Murray, 108 Palmer Road, Oak Ridge, died at the Oak Ridge Hospital June 14. He retired from Y-12 in 1973, from the inspection department. He is survived by his wife, a daughter, three grandchildren, a son, four sisters and a brother.

ORNL RETIREE DIES

Ida H. Guinn, who retired from ORNL in 1969, died June 25 at a Knoxville hospital. Prior to her retirement, Miss Guinn worked as a secretary in the Operations Division. Miss Guinn is survived by a sister, Mrs. Robert Berry, and a brother Frank J. Guinn, both of Knoxville.

Savings Plan-Personal Investment Account

Recent unit values:

	Fixed Income Fund	UCC Stock	Equity Investment Fund
February 74	$10.3742	$34.4209	$8.8328
March 74	10.4402	37.7558	8.6079
April 74	10.5058	39.1736	8.1387
May 74	10.5729	41.0354	7.9920

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 7-¾% for 1974. Union Carbide stock values are the average cost of stock purchases during the month plus brokerage charges. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. Dividing the total value by the number of units in the fund establishes the month's unit value - and the price at which new units are added that month.

ORNLer makes replicas from brass and wood

Most people have things they like to do in their spare time. Some participate in sports, others read, sew, dance or sing. Still others enjoy painting, creative writing, or using natural or fabricated materials to display their artistic abilities.

Some are even fortunate enough to be good enough at what they like to do that others are willing to pay for the enjoyment of seeing or owning their work.

James Brashier, a planner-estimator in the Plant and Equipment Division at Oak Ridge National Laboratory, is one of these artistic people. Brashier's "thing" is making miniature replicas of animals and historic wagons and coaches out of wood and brass.

Machinist by trade

Brashier began his rather unique hobby, in earnest, about four years ago after his ankle was crushed during a fall while helping a neighbor build a barn. He had always enjoyed working with his hands (he is a machinist by trade), but had never found much time to sit down and really test his skills before the accident.

Brashier's collection includes a variety of farm wagons, beautifully constructed stagecoaches and several kinds of animals. Brashier has a small work shop in his home, where he constructs his crafts by hand. Each of the wagons has all the working part of an original and is fully operational, even down to the brakes. The wagons are held together by tiny brass wires, which are run through holes drilled in the wood. The wires are then bradded on either side. The size of the wagons is about one-twentieth scale.

Exact replicas

To make sure that his replicas are exact, Brashier copies from originals whenever possible. He has bought two old wagons for this purpose. He found a one-horse hack in the barnyard near his home, but the owner wouldn't sell it. So Brashier made numerous trips to the barnyard to copy the wagon. It usually takes about 80 hours to construct a regular farm wagon.

Plans for the stagecoach were found in a magazine. It took Brashier about 100 hours to construct the coach. Special attention was paid to all the details of the original. Included are the rolled curtains made of leather, chained attached luggage carrier, driver's mount and seat, and even glass windows and lamps on either side of the coach. The entire coach, like the original, is suspended on leather springs.

PART OF COLLECTION — James Brashier is shown with several wagons and animals he has made out of wood and brass.

Brashier is a member of the Southern Highlands Handicraft Guild. He plans to submit some of his work for exhibit at the Craftsman's Fair of the Southern Highlands which will be held in Gatlinburg, October 15-19.

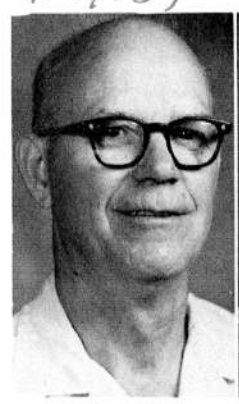
Brashier has worked at ORNL for 28 years. His wife, Norma, also works at ORNL in the Health Physics Division. They reside at Northshore Drive in Concord.

1954-74

MASTERPIECE — This stagecoach is one of the most detailed pieces of work Brashier has done. Construction of the coach took about 100 hours.

Division Retirees

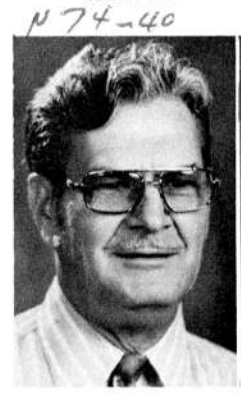
N74-39 N74-38



Crawford

Hopper

N74-40



Mase

Matthews

Five Y-12ers with many years' company service retired at the end of June.

James L. Crawford, research services, lives at 102 S. Tampa Circle, Oak Ridge. He came to Y-12 in 1944.

James A. Davis, buildings, grounds and materials shops, joined Union Carbide in 1950. He retires to his Route 1, Kingston home.

Russell Hopper, dimensional inspection, recently completed 30 years' service with the company. He lives at 236 Vermont Avenue, Oak Ridge.

James F. Mase, quality evaluation, joined Union Carbide in 1958. He lives at 4321 Climbing Road, Knoxville.

C. Lamar Matthews, product information center, has elected an early retirement. He joined Union Carbide in 1946. He and his wife, Lorena, manager of Y-12's credit union, live at 7932 Stratton Drive, Knoxville.

God save me from a bad neighbor and a beginner on the fiddle.

Italian

Calendar of EVENTS

July 8

ORNL Summer Seminar Series on Energy: "Energy and the Environment," S. I. Auerbach. Central Auditorium, Building 4500N, 3:30 p.m.

July 10

Solar Energy Series: "Bioconversion of Wastes to Methane," George Tchobanoglaus, University of California, Davis. Central Auditorium, Building 4500N, 11 a.m.

July 11

Gas-Cooled Reactor Program's Bimonthly Information Meeting: "Recent Improvements in Capabilities for Postirradiation Examination and Analysis of HTGR Fuels," F. J. Homan; "Results from Reactor Surveillance at the Peach Bottom HTGR, or How Surveillance Pays Off," H. J. de Nordwall; "Initial Off-Gas Cleanup (KALC) Studies in the ORGDP Pilot Plant," R. W. Glass; and "Status of Conceptual Design on GCFR Core Flow Test Facility," A. G. Grindell. East Auditorium, Building 4500N, 9 a.m.

July 15

Solar Energy Series: "Ocean Thermal Power Plants," R. R. Rothfus, Carnegie-Mellon University. Central Auditorium, Building 4500N, 11 a.m.

ORNL Summer Seminar Series on Energy: "The Chemistry of Coal as an Energy Source," G. P. Smith. Central Auditorium, Building 4500N, 3:30 p.m.

July 15-19

IAEA Symposium on Dynamic Studies with Radioisotopes in Clinical Medicine and Research: Hyatt Regency House, Knoxville.

July 17

Solid State Division Seminar: "Anisotropic Scattering of Conduction Electrons by Point Defects in Aluminum," K. Bonning, Technical University of Munich, Germany. Conference Room, Building 3025, 10 a.m.

Five promotions announced in barrier manufacturing

Five promotions have been announced in the Barrier Manufacturing Division at the Oak Ridge Gaseous Diffusion Plant. Donald L. Bird, Roy L. Hill, Gerald B. Neely and John W. Steele Jr., have been named supervisory trainees, and Carlos R. Vanover has been promoted to inspector.

Bird, a native of Oklahoma City, joined Union Carbide at ORNL in 1967, and was at the Y-12 Plant from 1970 to 1973, at which time he transferred to ORGDP.

Mrs. Bird is the former Barbara Wormsley, and they have two children, Lisa Ann and William Anthony. Their home is in Coalfield, Tenn.

Hill, who has also worked at all three Oak Ridge plants, has been at ORGDP for more than two years. He is a native of Harriman, and is married to the former Stefenie Whalen.

The couple has two children, Amanda Gayle and Adam Justin, and they live at Route 2, Harriman.

Neely, who is a native of Monroe, Mich., but grew up in New Tazewell, Tenn., worked with Jensen Corporation and Olivetti Underwood in Knoxville, prior to joining ORGDP three years ago.

He is a graduate of Claiborne County High, and completed technical school on office machines and computers in Hartford, Conn., and New York.

Neely is married to the former Betty Ogan and they have two children, Teresa Ann and Toni Michele. Their home is at 8201 Ewing Rd., Powell.

Steele, a native of Chattanooga, graduated from Lenoir City High. He worked at Y-12 before transferring to ORGDP in 1973.

He is married to the former Helen Thompson and they have two children, Russell and Valerie. The family home is at Route 5, Martel Road, Lenoir City.

Vanover has been at ORGDP for over 28 years. Prior to joining Union Carbide he worked with the soil conservation service, and served in the U. S. Army.

Vanover, a native of Whitley City, Ky., is married to the former Wilma Bryant, and they live at Route 5, Carroll Ave., Harriman.

PH 74-1667

Bird

PH74-1751

Hill

PH 74-1674

Neely

PH74-1664

Steele

PH74-1669

Vanover

COMPANY Service 20 25 30

ORNL
30 YEARS

Margaret W. Herring, Information; James E. Ferguson, Operations; Clyde L. Mayes, Plant and Equipment; Noah L. Ensor, Biology; Paul E. Phillips, Isotopes; John R. Jones, Instrumentation and Controls; and Carl B. Bittle, Plant and Equipment.

25 YEARS

Milton H. Lietzke, Ross N. Everett and Wallace L. Vanhoozier.

20 YEARS

James R. Tarrant, Bertie L. Byrum, John Q. Hopwood, Hoy C. Smith, Jackson H. Devan, Robert E. Clausing, Thomas P. Hamrick, Robert S. Durham and Robert D. Birkhoff.

ORGDP
30 YEARS

George B. Kearns, shift superintendents department; George H. Miles, fabrication shop department; James V. Mason, chemical operations administration; Carl Y. Jacobs, power and utilities maintenance; Charles E. Seiber, grounds maintenance department; Edna R. Cary, uranium control department; and William C. Lisenbee, cascade maintenance department.

Y-12 PLANT
30 YEARS

Chester R. Fultz, Development Division; Thomas H. Allison, guard department; Mark D. Varnadore Jr., buildings, grounds and maintenance shops; Omer D. Cloyd, guard department; Porter L. Holland, research services; Thomas P. Wicker Jr., Engineering Division; Harry W. Grubb, casting department; J. D. Silver, research services; James C. Nelson, radiation safety; Frank P. Adams, materials forming; John W. Landry, assembly engineering; George W. Peach, B-2 expansion assembly; Thomas E. Barnes, utilities administration; and Dorothy R. Moore, production assay.

PADUCAH
20 YEARS

G. Garlon Dowdy.

New physical fitness program is set up in Nuclear Division

It is generally recognized that the ordinary tasks of daily living no longer provide enough vigorous exercise to develop and maintain good physical fitness. Machines used at home and at work have virtually eliminated the necessity for walking and climbing stairs. One of these machines - the television set - holds many people in captive idleness for several hours each week.

More and more businesses and industries are realizing the importance of encouraging employees to stay physically fit. It is a known fact that employees who are physically fit feel better, have fewer absences from work and are usually more productive than those who are not.

"We challenge you"

With these facts in mind, the Nuclear Division's Recreation Department has set up a physical fitness program called "we challenge you." The program is patterned after and will include the presidential sports award established by the President's Council on Physical Fitness and Sports in 1972.

The presidential sports award package consists of an emblem, a pin and a certificate signed by the President of the United States. A congratulatory certificate signed by Roger Hibbs, Division President, will also be presented to employees on completion of the requirements.

Requirements

To qualify for the award, an employee must have a minimum of 50 hours of participation in the sport of his/her choice, spread over at least 50 activity sessions. The program for any one sport must be completed during a period of four months, although concessions will be made in sports where seasons are short or access to facilities is limited. Fifty hours of activity will still be required, but they may be obtained in fewer than 50 sessions.

Participation in the program is voluntary, and must be done on the employee's own time. Since not everyone enjoys participating in contact or competitive team sports, there are 31 different sports from which to choose. You may decide to participate in several and get an award in each, or you may want to concentrate on just your favorite one.

31 sports

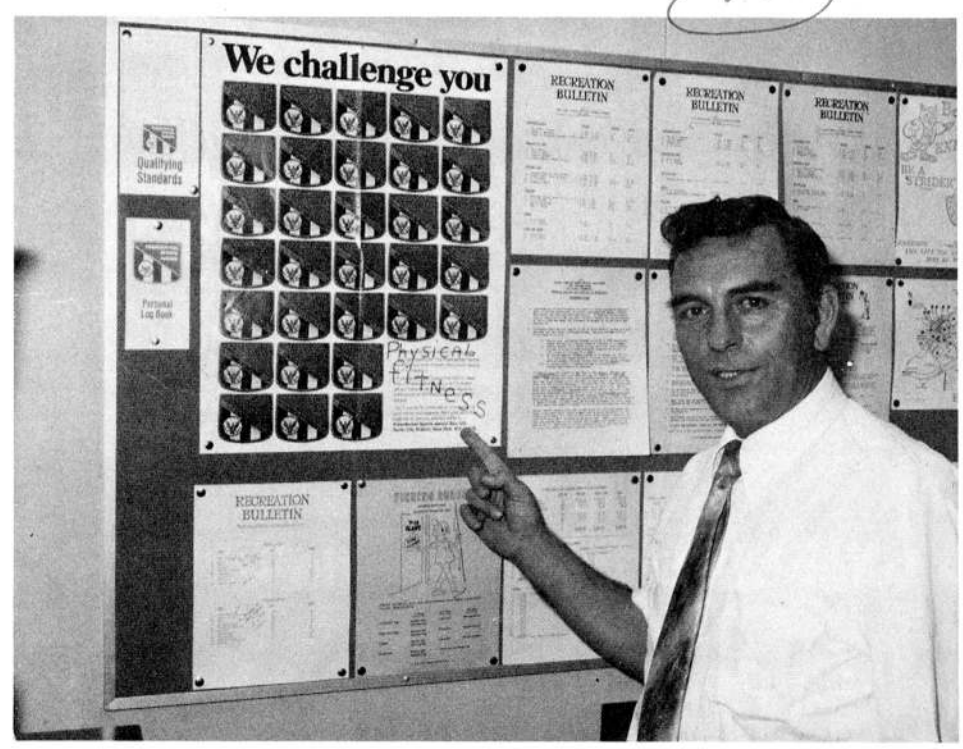
The sports in which you may qualify are: archery, back packing, badminton, biathlon (running and shooting), bicycling, bowling, canoe-kayak, climbing, equitation (horseback riding), fencing, figure skating, golf, handball, ice skating, jogging, judo, karate, orienteering (combination of running and doing different exercises), pentathlon (includes running, swimming, fencing, shooting and horseback riding), raquetball, rowing, rugby, skiing (Alpine), skiing (Nordic), softball, swimming, table tennis, team handball, tennis, volleyball and water skiing.

Awards are free

The Nuclear Division will purchase the awards package for employees who complete the requirements. However, fees charged by instructors or for rental of facilities must be borne by each employee.

Employees who have physical limitations or who are over 40 and do not routinely engage in strenuous exercise are advised to consult their personal physician before beginning the program.

A personal log book, which when completed and signed becomes the employee's application form, and a copy of the qualifying standards for the 31 sports in which the award will be given may be obtained by contacting the Recreation Department in Oak Ridge, Bldg. 9711-5, extension 3-5833; or Keith Bryant's office in Paducah, Bldg. 100, Pax 324 or Bell 368.



CHALLENGE FROM WHIT — E. W. "Whit" Whitfield, recreation director, challenges fellow employees to get involved in the Nuclear Division's physical fitness program, and earn an award in their own particular field.

RECREATIONOTES

ANOTHER HOLE-IN-ONE

James T. Barker, ORNL's Isotopes Division, made a spectacular hole-in-one on Fathers' Day at the Oak Ridge Country Club. Barker scored an ace on the 6th hole, 168-yard using a five iron.

This was the first hole-in-one for Barker, who has played golf for about 20 years.

SOFTBALL LEAGUES

The Snakes are still holding the lead in the Atomic League with 11 wins and no losses. In the Nuclear League the Rats moved up to the number one spot, after the Computes lost two games.

League standings follow:

ATOMIC LEAGUE

Team	W	L
Snakes	11	0
Ecology	8	4
Red Barons	7	4
Supersonics	8	5
Gashouse Gang	8	5
Streakers	5	4
Y-12 Sox's No. 2	2	8

NUCLEAR LEAGUE

Team	W	L
Rats	11	1
Computes	9	2
Raiders III	8	2
Over-The-Hill Gang	9	3
The Losers	5	2
Bombers	6	5
Al's Pals	5	4
Bio-Rejects	5	6
Hornets	5	6
Avengers	3	7
Artie's Army	3	8

CAMERA CLUB MEETING

The Carbide Camera Club will hold its monthly meeting Tuesday, July 19, at 7:30 p.m. in room D-213, Cheyenne Hall. Anna Dobbins will discuss copying and restoring old photographs.

July competition for Camera Club members will be color slides of boating and water scenes.

The public is invited to attend, and further information may be obtained from John Blankenship, ext. 3-3533.

CARBIDE GOLF

Standings for Carbide Golf Leagues are listed below:

Y-12 "J" Shift Golf

Team	Won	Lost
Sise - Hammond	22	8
Smith - Collins	18	12
Watkins - Dowery	17	13
Rowland - Lard	12	18
Baxter - Sewell	12	18
Lovett - Lincoln	9	21

Y-12 Melton Hill Golf League

Alvey - Wright	26	4
Winstead - Wyrick	23	7
Mundt - Bailey	21	9
Morrow - Williams	16	14
Tiller - Parker	15	15
Gill - Ridings	14	16
Dagley - Raley	13	17
Petrie - Lampton	10	20
Palmer - Fletcher	9	21
Carter - Rogers	3	27

South Hills Golf League

Cozart - Graham	32	10
Stafford - Madewell	30	12
Burrus - McGinnis	27	15
Wright - Bryant	26	16
Pitt - DeBakker	24	18
Henderson - Nicely	23	19
Bennett - Jones	22	20
Sise - Boyd	21	21
Blankenship - Hutson	17	25
David - Long	17	25
Pappas - Pryor	13	29

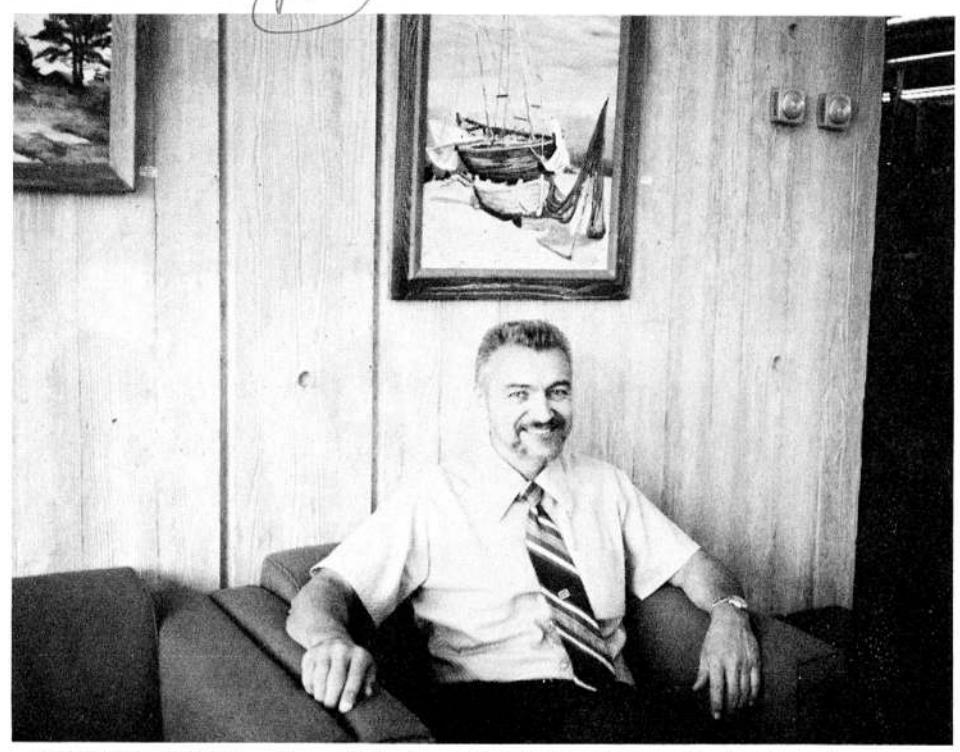
Southwest Point Golf League

Copeland - Boatwright	23	7
Briscoe - Williams	18	12
Stanton - Chapman	18	12
Phillips - Wintere	16	14
Crawford - Ooten	14	16
Strunk - Duff	12	18
Nier - Schilling	11	19
Lay - Creswell	8	22

ORGDP "D" Shift Golf

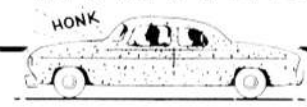
Morton - Priode	49
Giffin - Smith	39
Walker - Hurley	38
Sharpe - Rose	37
Kent - Everhart	32
Johnson - Williford	29
Morrison - Ballard	23
Cantrell - Goodman	9

VOLLEYBALL CHAMPS — The Pack took the crown in the Atomic League of the Volleyball League. In the front row from left are Trig Myhre, Dick Woods and Bill Appleton. In the second row are Bob Minturn, Steve Kaye, Paul Rohwer and Dave Pilati.



CURRENT SHOW — Howard Cochran, Oak Ridge National Laboratory, has an art exhibit at the Oak Ridge Public Library. His art will be there through July 13.

WANTED



ORNL

CAR POOL members from Waddell, West Outer or Pennsylvania Avenue areas, Oak Ridge, to East or North Portal, 8:15 a.m. shift. Tom Burnett, plant phone 3-6939, home phone 483-1975; or Dick Reed, 3-1801 or 483-3458.

CARBIDE BOWLING

The Oops are still holding the lead in the Carbide Family Mixed League. They have taken 12 games so far with no losses. The Teardrops are in second place with 9-½ wins.

The Oops also took high team series with a handicap of 2286. Norman Teasley, Streakers, and Tillie Plaza, Oops, took individual series highs with handicaps of 694 and 603, respectively. Gus Legeay of the Who Cares, and Tillie Plaza had individual scratch highs of 212 and 186, respectively.

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Cost increase announced for enriching services

The Atomic Energy Commission has increased charges for enriching uranium used as fuel in nuclear power plants to $47.80 per separative work unit (SWU) under Requirements-type contracts and $42.10 under Fixed-Commitment contracts effective December 18. Under escalation clauses in the current contracts, charges reached $39.30 and $36.80 as of July 1.

Charges for uranium enrichment will be automatically increased by two percent every six months beginning July 1, 1975. This automatic increase, which is intended to partially offset future increases in costs, has been raised from a rate of one percent every six months to reflect past experience.

The differential between the Requirements-type and Fixed-Commitment charges, which reflects differences in risks and costs between the two contracting forms, has been increased primarily because Fixed-Commitment contract customers are being credited for interest earned on advance payments required under those contracts. Holders of Requirements-type contracts may convert to Fixed Commitment agreements if desired.

The basis of the charges, as set forth in the Atomic Energy Act of 1954 as amended, is to recover "the Government's costs over a reasonable period of time." Should the periodic automatic increases not keep pace with costs, the Commission would take appropriate action to modify either the rate of increase or the charges.

Increased charges are needed, the Commission said, because of increase in actual and projected costs of enrichment plant operations - primarily electric power - and to recover costs associated with gas centrifugation research and development. The latter action contributes only about $2.15 to the $8.50 increase from $39.30 to $47.80.

THE LAST WORD

The old adage has been given a reverse twist by inflation. Now one can live as cheaply as two used to.

10 Benefits from physical fitness

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning their health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, or call the news editor in your plant, and give him your question on the telephone.)

By T. A. Lincoln, M.D.

Physical fitness is defined as the ability to carry out daily tasks with vigor and alertness, without undue fatigue and with ample energy to enjoy leisure-time pursuits and to meet unforeseen emergencies. The following 10 benefits of physical fitness are available for those willing to give the time and effort to achieve them:

1. Psychological

Feel better. Discharge anger and frustration harmlessly with a vigorous game or an exhausting run. Clear the mind with muscular activity. Reduce the frequency of headaches, calm roiled guts and diminish emotional fatigue. Develop a personal self-confidence dependent only on participation. Winning or becoming a champion is not necessary.

2. Cosmetic

Get a better muscle tone, a flatter abdomen, smaller hind quarters. Have your clothes fit and look better. Disguise age with an erect posture and a bouncy step.

3. Weight Control

Men - Let the air out of the spare tire around your abdomen. Women - Reduce the toss and tumble in your abdomen and backside. Exercise does not proportionately increase appetite and does lose weight. A woman need only eat 96 calories more than she expends each day to gain 50 pounds in five years. If she takes a 25 minute brisk walk each day and eats the same amount she will not gain a pound.

4. Survival

Having a reserve of energy and endurance may save your life if you have a critical illness or a life threatening accident. Your ability to run, climb, pull or swim in an emergency can be the difference between life and death for you or your family.

5. Decreased Injury Potential

Back injuries and miscellaneous sprains and strains are more likely with unconditioned bodies. If your back muscles have frequent modest use, they are less likely to get tied up in knots when you lift something while in an awkward position. A conditioned body is the best insurance against that time when the mind is "asleep" and the body is asked to do more than it should.

6. Flexibility and Agility

The ability to regain balance after beginning to fall, to quickly grasp for support or to jump out of the way can prevent a serious or even fatal injury. A body used to physical exercise can usually react quicker and is more flexible. Bending, stooping, reaching, crawling and climbing are easier.

7. Prevent a Heart Attack

Physical exercise may reduce the occurrence or severity of coronary heart disease by increasing collateral circulation around an area of restriction in a coronary artery, improving heart muscle efficiency, lowering levels of serum cholesterol and triglycerides, reducing tendency for blood clots to form due to a favorable effect on the blood coagulation mechanism, reducing blood pressure, controlling weight and by reducing psychic stress.

8. Endurance

The physically fit tolerate exhausting mental or physical work better than the unfit. When success in an endeavor requires going "all out" for weeks on end, the fit individual will suffer less fatigue and will snap back quicker with a night's rest.

9. Strength

Although raw strength is rarely required today, it can be life saving in an emergency or mighty convenient when a power tool is not immediately available.

10. Slow Down Aging

The maintenance of physical fitness throughout life will delay the appearance of many of the following stigmata of aging or reduce their severity when they do appear (modified from a list by Professor Thomas K. Cureton, Director of Physical Fitness Research Lab, University of Illinois, Urbana): accumulation of fat; lowering of basal metabolic rate; loss of muscular strength; slowing of reaction time; reduction in motor fitness such as balance, flexibility, agility, power and endurance; reduction in work capacity and associated oxygen intake capacity during attempts at hard work; reduction in vision, especially near and night vision and speed and color discrimination; reduction in respiratory reserve; increase in ligamentous injuries; increase in peripheral vascular resistance, cholesterol and blood pressure; decrease in elasticity of arteries; reduction in capacity to adjust to intensive speed work or stress suddenly imposed; a decline in computational speed, memory, mental energy and reasoning capacity; reduction in physical courage; greater introversion and preoccupation with money, competition and responsibility; loss of high frequency hearing; decline in sex drive; thinning and wrinkling of skin.

Does maintaining fitness seem worth an investment of at least one hour three times a week?

ORNL

JOIN CAR POOL from North Purdue Avenue, Oak Ridge, to East Portal, 8:15 a.m. shift. R. Salmon, plant phone 3-6838, home phone 483-0803.

Y-12 PLANT

CAR POOL members from Norwood, Cherokee Ridge area, Knoxville, to any portal, straight day. Eugene Keith, plant phone 3-7615, home Knoxville 947-8573.

Binford, Cox, Cunningham, Epler named 'ANS fellows'

Three staff members and one consultant at Oak Ridge National Laboratory were elevated to "Fellow of the American Nuclear Society," at the 20th annual meeting of the Society in Philadelphia, June 25. This token of recognition is reserved for acknowledged attainment in the nuclear field by notable original research or invention, by technical leadership of substantial scope, or by outstanding leadership as a teacher.

Binford Cox

Binford

Franklin T. Binford is head of the development department of the Operations Division. He is in charge of technical support and long-range planning for the Division's reactors and waste disposal operations. His primary concern is in the area of nuclear safety.

A native of Philadelphia, Binford received the B.S. degree from Pennsylvania State University and did graduate study in physics and mathematics at The University of Tennessee. He joined the ORNL staff in 1948, and has authored over 50 publications in the open literature.

Binford was honored for his "leadership in the formation and continuing yearly business of the ANS Reactor Operations Division; for his diligent work on nearly all program committees for topical meetings of this Division and for serving as its first chairman; and for his outstanding work in reactor safety and related fields."

Cox

James A. Cox is superintendent of the Operations Division. His responsibilities include reactor and hot cell operations and radioactive waste disposal.

Cox received the B.S. degree in chemical engineering from Washington State College and has done graduate study at Brown University. He joined the ORNL staff in 1946 after serving a tour of duty in the U.S. Army.

Cox was cited by the ANS for his "dedicated and effective leadership in developing and documenting operational practices for research reactors; for his work in which he has stressed safety and efficiency as permanent criteria; and for his service in training many of the world's reactor supervisors who have been materially influenced by his philosophies of reactor operation."

Cox has served in several leadership positions for the ANS. He is currently general chairman of a symposium on training of nuclear facility personnel. He is the author of many publications.

Cunningham

John E. Cunningham is associate director of the Metals and Ceramics Division. He received the B.S. and M.S. degrees in metallurgical engineering from the University of Illinois and The University of Tennessee, respectively.

Cunningham came to work at ORNL in 1946. He has served on various USAEC committees and has chaired several technical meetings. He was the U.S. delegate to the 1955 Geneva conference on peaceful uses of atomic energy, a member of the team sent to operate the Geneva conference reactor, and was a member of the team sent to the fuel element conference in Paris in 1957.

Cunningham's honor was based on what the ANS described as his "pioneering work in the development of alloy and dispersion-type fuel elements, for his direction of one of the country's largest research and development efforts on nuclear materials, and for diligent contributions to ANS."

Cunningham

Cunningham is currently a member of numerous ANS committees, including the Executive Committee. He is a member of the Ceramics Engineering Advisory Board of the University of Illinois and a member of the American Society for Testing Materials. He holds fellowship in the American Society for Metals. He has authored about 40 publications and has been granted two patents.

Epler

Elbert P. Epler worked in the Instrumentation and Controls Division for over 20 years before he retired in 1968. He currently serves as a consultant to that Division.

Epler was honored for his "pioneering effort in reactor control and safety concepts and practices which have been part of the basic philosophy of the industry, and for his contributions to the Advisory Committee on Reactor Safeguards and ORNL as head of the reactor controls department."

Epler has authored approximately 20 publications and is the co-holder of several patents for nuclear reactor control systems.

Health Physics and P&E promote three ORNL men

Lockett

Cooper

Lowery

The promotion of three employees has been announced by ORNL. Ray C. Cooper has been named an applied health physicist in the Health Physics Division. Guinn A. Lockett and T. Eugene Lowery have been promoted to machining foreman and services coordinator, respectively, in the Plant and Equipment Division.

Cooper, a native of Powell, has a degree in business administration from The University of Tennessee. He worked at Thurston Motor Lines in Knoxville before joining the ORNL staff in 1962.

Cooper and his wife, Betty, live at Route 1, Heiskell, Tenn. They have two children, Ray Jr. and Pam.

Guinn A. Lockett graduated from Bearden High School and attended The University of Tennessee. He received training as a machinist through the ORNL apprenticeship program. Lockett, who came to ORNL in 1951, previously worked in the Operations Division.

Lockett and his wife, Margaret Ann, have three children, Alex, Rachel Ann and Jennifer Elaine. They reside at 512 Nobscot Road, Knoxville.

Eugene Lowery was born in Saltillo, Tenn., but grew up in Knoxville. He graduated from Austin High School and attended Cooper Institute. Lowery served two years in the U. S. Army and worked at Oak Ridge Associated Universities before joining the ORNL Biology Division in 1966. He had worked as a foreman's clerk in Plant and Equipment since 1970.

Lowery and his wife, Claudia, live at 3616 Skyline Drive, Knoxville. They have three sons - Rodney, Anthony and Thedford Jr.; and four daughters - Shelia, Teresa, Alfredda and Eliza.

NOTE OF INTEREST

Kuang-Hui Lin, ORNL's Chemical Technology Division, has contributed a chapter to the 5th edition of **Perry's Handbook for Chemical Engineers.** Lin's chapter is titled, "Reaction Kinetics in Reactor Design." Perry's Handbook is the standard reference work which is used by engineers and chemists around the world.

QUESTION BOX

(Continued from page 1)

ume, we believe you can agree that it is necessary for them to standardize the processing of claims wherever possible if they are to get them paid within a reasonable time. The drug form is one instance of this standardization. By having all of the charges appear on one form rather than on a number of signed receipts, it enables the insurance company to process the claim faster and helps assure that one or more of the loose receipts do not get lost.

Your cooperation in spending the time necessary to obtain proof of your claims in the standard format will enable all who have claims to get them paid a little faster.

QUESTION: What action is the Company willing to take when one employee, while on the job, goes around making false statements against another employee?

ANSWER: Personal relationships between employees are their own concern unless there is activity that interferes with the efficient performance of work or involves a violation of installation rules or regulations. In such case, the matter would be investigated and a determination made as to what action, if any, should be taken by supervision.

QUESTION: How does a weekly salaried clerical employee, who is at the top of his salary code, go about getting a much needed cost-of-living increase? I have had only one increase (5.3 percent) in the past three years and the cost of living has gone up over 18 percent during this same period, causing an extreme hardship on my family.

ANSWER: An employee at the top of the rate range has two ways of earning a salary increase. The first way is to perform at a level substantially above normal for the classification, since the middle of the rate range is the rate normally paid for average performance. If the employee is performing at a level substantially above normal, he will receive the increases resulting from the annual movement of the rate range from year to year. This amount would have been far in excess of the increase you say you have received in the past three years.

A second method of earning an increase is by moving into a higher level position which would provide more money in recognition of the promotion.

QUESTION: Several times I have asked my immediate supervisor for a transfer to another job. To no avail. What is my next move?

ANSWER: Your question lacks specifics as to your interest in a transfer to a particular job and the reason, if any, for denial of consideration, both of which are basic to a comprehensive answer. However, generally speaking, you should advise your supervisor that you would like to discuss the possibility of a transfer with his supervisor or your installation's Employment Office; or if you are a nonexempt salaried employee, look for openings, which are now posted, in which you might be interested.

SS benefits; company contributes

(Continued from page 2)

Examples of Monthly Social Security Payments

Benefits Can be Paid to	Average Yearly Earnings Since 1950					
	$4,000	$5,000	$6,000	$7,000	$8,000	$9,000
You, the worker						
▶ Retired at 65	228.50	264.90	299.40	335.50	372.20	393.50
▶ Under 65 and disabled	228.50	264.90	299.40	335.50	372.20	393.50
▶ Retired at 62	182.80	212.00	239.60	268.40	297.80	314.80
Your wife						
▶ At 65	114.30	132.50	149.70	167.80	186.10	196.80
▶ At 62, with no child	85.80	99.40	112.30	125.90	139.60	147.60
▶ Under 65 and one child in her care	162.00	224.00	249.90	262.40	279.20	295.20
Your widow						
▶ At 65 (if worker never received reduced retirement benefits)	228.50	264.90	299.40	335.50	372.20	393.50
▶ At 60 (if sole survivor)	163.40	189.50	214.10	239.90	266.20	281.40
▶ At 50 and disabled (if sole survivor)	114.30	132.60	149.80	167.80	186.20	196.80
▶ Widowed mother and one child in her care	342.80	397.40	449.20	503.40	558.40	590.40
Maximum family payment	390.50	488.90	549.30	597.90	651.40	688.70

Division Retirees

Two employees with combined company service of over 59 years retired from ORNL July 1.

Clarence V. Kunkel was a carpenter in the Plant and Equipment Division. He came to work at ORNL in August, 1945.

Kunkel and Mary Ruth, his wife, have four children. They reside at 270 Robertsville Road, Oak Ridge.

Robert L. Knight was a technical illustrator in the Information Division. He taught high school in Nebraska and served as an instructor of aircraft mechanics in the U.S. Army/Air Force prior to joining the ORNL staff in 1944.

Knight and his wife, Helen, live at 108 West Newkirk Lane, Oak Ridge. They have three children and two grandchildren.

Knight

Kunkel

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